

lag command (Link Aggregation)



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Description

Link Aggregation is using multiple physical channels at once as one logical channel to increase the total link capacity and provide redundancy. This technology can be used, for example, to set up a high-capacity link between a device and a network switch, aggregating two available Ethernet interfaces. The total speed of such link will be a sum of the Ethernet interfaces speeds. Moreover, in case of one Ethernet connection failure its traffic will be passed to the other one without stooping the services. If later the fallen Ethernet connection will be reestablished the traffic will be sent over both Ethernet interfaces again.

Infinet Wireless LACP (Link Aggregation Control Protocol) realization fully complies with the IEEE 802.3ad standard for link aggregation. In addition, special proprietary LACP mode can be enabled that provides process efficiency enhancement over the standard mode.

The link aggregation functionality is configured on the device using a "*lagN*" logical interface.

To activate the logical interface, the following command must be used:

```
ifconfig lagN up
```

Otherwise, the settings will be applied to the interface, but will not be executed.



CAUTION

In case it is necessary to aggregate the interface through which the device management is performed, before activating the "*lagN*" interface, assign it an IP address by using the "*ifconfig*" command, to avoid loss of access.

Syntax:

```
lag N [command] [(port|-port) (IFNAME | IFNAME...)]
    where [command] is:
    status          - show lag interface status
    migrate         - enable session migrate
    -migrate        - disable session migrate
    balance         - enable session-oriented load balancing
    -balance        - disable session-oriented load balancing
    mode            - switch lag interface mode. Modes: (stand|fast)
    clear           - remove lag interface from configuration
    loadm           - show realtime per-port load status
```

Parameters

| Parameter | Description |
|---------------------------|--|
| IFNAME / IFNAME... | An argument that defines the physical network interfaces (parent interfaces) that will be used for aggregation. |
| port -port | Enables link aggregation on the device. Creates logical " <i>lagN</i> " interface in the system and assigns parent physical interfaces to it. " <i>-port</i> " – removes one or more parent interfaces from configuration. |
| status | Displays the " <i>aggregation id</i> " value, the load on each of the parent interfaces and its status. |

| | |
|----------------------------------|---|
| <i>migrate/-migrate</i> | Enables/disables existing sessions migration between the available parent interfaces in case of the difference in the overload. By default, migration is allowed. |
| <i>balance/-balance</i> | Enables/disables distribution of new-coming sessions between the available parent interfaces depending on their load. By default, balancing is enabled. |
| <i>mode (stand/ fast)</i> | Sets the LACP mode. In " <i>standard</i> " mode, LACP acts in accordance to the IEEE 802.3ad standard. In " <i>fast</i> " mode, IW proprietary extensions are used: the timeout value is reduced to 2 seconds, the current network interface load information is added to the packet reserve fields, allowing to speed up the LACP response significantly depending on network conditions, optimize the aggregation systems, and obtain more accurate statistics. |
| <i>clear</i> | Removes the " <i>lagN</i> " interface configuration. |
| <i>loadm</i> | Shows the load statistics in real time on each of the parent interfaces. |

Examples

Creates logical "*lag1*" interface, using both device Ethernet interfaces. Assign an "*10.10.30.16/24*" IP address to created interface. Activate the logical interface.

```
lag 1 port eth0 eth1
ifconfig lag1 10.10.30.16/24
ifconfig lag1 up
lag1 link administratively up
```

Remove "*eth1*" interface from configuration.

```
lag 1 -port eth1
```